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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/128,251	08/03/1998	IZUMI MATSUI	B208-975	2424

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EXAMINER

CHIEU, PO LIN

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/128,251

Applicant(s)

MATSUI, IZUMI

Examiner

Polin Chieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 12-19 and 20-28 are objected to because of the following informalities: the claims recite, "memory means connected to each of said compressing means and said generating means". However, claim 12 discloses an "expanding means" and claim 20 discloses a "processing means"; neither discloses a compressing means. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al (4,992,782).

Regarding claim 1, Sakamoto et al discloses inputting means for inputting a video signal (22, fig. 2); compressing means for compressing an amount of information of the video signal (32); generating means for generating a character signal (9, 11); and memory means (7) connected to each of the compressing means and the generating means and having a common memory for storing the video signal (graphics data) to perform a compressing process by the compressing means and storing the character signal generated by the generating means to perform a combining operation of the

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character signal (col. 5, line 8 – col. 6, line 40). Note: the examiner has interpreted the graphics picture as the video signal not the television signal. The graphics data is inputted with the video signal and extracted by the receiving circuit (col. 4, lines 63-68), compressed, and then stored (col. 5, line 8 – col. 6, line 40).

Regarding claim 2, Sakamoto et al discloses a combining means for combining the character signal generated by the generating means with the video signal (25).

Regarding claim 5, Sakamoto et al discloses outputting means for outputting a video signal outputted from the combining means to a display device (29, fig. 2), said display device displaying an image represented by the video signal outputted from the outputting means (fig. 4).

The limitations of claim 20 were discussed in the art rejection of claim 1. Please refer to the art rejection of claim 1 (note: a compressing means is a type of processing means).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3-4, 6, 11-16, 20-21, 25, and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al in view of Takemoto et al (5,065,246).

Regarding claims 3 and 4, Sakamoto et al does not disclose that the compressing means compresses an amount of information of a video signal outputted from the combining means; and outputting the compressed video signal to a recording device, wherein the recording means records the video signal on a recording medium.

As discussed previously Takemoto et al teaches compressing an amount of information of a video signal outputted from the combining means (col. 8, lines 42-46); and an outputting means (34, fig. 7). Although a recorder is not shown connected to the output, it is well known in the art to connect a recorder to the output of a device to record the video data on a recording medium.

It would have been highly desirable to compress the video signal outputted from the combining means to reduce the amount of video and character information, thereby requiring less storage capacity if the data is recorded or less bandwidth if the data is transmitted. It would have been highly desirable to record the data on a recording medium so that the data can be stored for future use or transferred to a different type of medium.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to compress and record the data in the device of Sakamoto et al.

Regarding claim 6, Sakamoto et al discloses combining means, as discussed previously. However, Sakamoto et al does not disclose that the combining means combines the character signal with the video signal captured by image pickup means.

Takemoto et al teaches combining the character signal with the video signal captured by an image pickup means (35, fig. 7) in col. 2, lines 54-64.

It would have been highly desirable to combine character signals with the video signal captured by an image pickup means so that character data can be combined with a video signal recorded by an image pickup means in addition to a received TV signal.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine character signals with video signals captured by an image pickup in the device of Sakamoto et al.

Regarding claims 11 and 21, Sakamoto et al does not disclose orthogonal transform means, quantization means, and variable length coding means.

Takemoto et al teaches compressing using discrete cosine transform (DCT). DCT is an operation performed during MPEG compression (a commonly known video format). It is well known in the art that MPEG compression uses orthogonal transform means, quantization means, and variable length coding means.

It would have been highly desirable to use MPEG compression because it is an established standard that is commonly used, and it is also a efficient compression technique.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use MPEG compression in the device of Sakamoto et al.

Regarding claims 12 and 29, Sakamoto et al discloses inputting means for inputting a video signal (22, fig. 1); and memory means (4) connected to each of the compressing means and the generating means and storing the character signal

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generated by the generating means to perform a combining operation of the character signal (col. 2, lines 32-66). However, Sakamoto et al does not disclose an expanding means for expanding an amount of information of the video.

Takemoto et al teaches performing a compression and expansion process on video and character data stored together in a memory and/or a recording means for recording on a recording medium (33, fig. 7) the video signal the amount of which has been compressed by the compressing means (col. 8, lines 42-46).

It would have been highly desirable to have an expanding means for expanding an amount of information of the video signal so that video data that was compressed to reduce the recording capacity used by the video signal could be read out and displayed. It would have been highly desirable to have a recording medium so that the compressed video data could be recorded without taking up as much recording capacity.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to compress, expand, and record the video data in the device of Sakamoto et al.

The limitations of claim 13 were discussed in the art rejection of claim 2. Please refer to the art rejection of claim 2.

Regarding claim 14, Sakamoto et al discloses that the combining means combines the character signal with the expanded video signal (fig. 4).

Regarding claim 15, Sakamoto et al discloses outputting means for outputting a video signal outputted from the combining means to a display device (29, fig. 2), the

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display device displaying an image represented by the video signal outputted from the expansion means (fig. 4).

Regarding claim 16, Sakamoto et al discloses inputting means for inputting a received TV signal; and writing the video into the memory means, the expanding means expanding an amount of information of the video signal written into the memory means by the inputting means (discussed previously). However, Sakamoto et al does not disclose inputting a video signal reproduced from a recording medium by a reproduction device.

It is well known to one of ordinary skill in the art that the video input from the TV signal receiving circuit can be replaced by an input from a recording medium or any other video input. Alternatively, one of ordinary skill in the art recognizes that it is common for a broadcast station to record video data before it is broadcast. Therefore, using either interpretation the video signal can be considered to be reproduced from a recording medium by a reproduction device.

It would have been highly desirable to have video signal reproduced from a recording medium so that the device can receive signals from a variety of sources.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have the video signal reproduced from a recording medium in the device of Sakamoto et al.

Regarding claim 25, Sakamoto et al does not disclose a high efficiency decoding means for decoding the video signal and for expanding an amount of the decoded video signal.

Takemoto et al teaches a high efficiency coding means (col. 4, lines 47-68), which requires a corresponding high efficiency decoding means for decoding the video signal and expanding an amount of the decoded video signal.

It would have been highly desirable to have a high efficiency decoding means (and coding means) so that the device can reduce the recording capacity needed to store data and regenerate the compressed data afterwards.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have a high efficiency decoding means in the device of Sakamoto et al.

The limitations of claim 30 were discussed in the art rejection of claim 2. Please refer to the art rejection of claim 2.

The limitations of claim 31 were discussed in the art rejection of claim 4. Please refer to the art rejection of claim 4.

The limitations of claim 32 were discussed in the art rejection of claim 5. Please refer to the art rejection of claim 5.

The limitations of claim 33 were discussed in the art rejection of claim 16. Please refer to the art rejection of claim 16.

The limitations of claim 34 were discussed in the art rejection of claims 12-13. Please refer to the art rejection of claims 12-13.

6. Claims 7-8, 17, 22-24, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al in view of Takemoto et al and Jeong (6,130,988).

Regarding claims 7-8, Sakamoto et al discloses using a memory for storing a video signal, compression, and generating a character signal. However, Sakamoto et al does not disclose a first, second, and third area; and reading out from the second area and outputting the read out video signal to a recording device for recording on a recording medium.

Jeong teaches partitioning a memory into separate areas to be used for separate processes (fig. 3). Since Sakamoto et al uses a single memory for storing video, compressed video, and character generation; it would have been obvious to partition the memory into separate areas for storing video; compressed video; and character data. (note: the examiner does not believe that the limitations require character data in the third area; however, this limitation has been met in the rejection).

Further, outputting the compressed signal to a recording device for recording on a recording medium is obvious, as discussed in the art rejection of claim 4. Please refer to the art rejection of claim 4.

It would have been highly desirable to partition the memory so that the device does not require separate memories for each process performed; and so that an area is allocated in the memory to perform each process preventing complicated management of data for different processes and/or interference from other processes using the memory at the same time.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to partition the memory and provide the signal to a recorder in the device of Sakamoto et al.

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Regarding claim 17, Sakamoto et al does not disclose a first, second, and third area.

As discussed in the previous art rejection, Jeong teaches separating a memory into several areas to be used for different purposes (fig. 3). It would have been obvious to have a first area storing video; a second area storing the expanded video; and a third area.

It would have been highly desirable to partition the memory so that the device does not require separate memories for each process performed; and so that an area is allocated in the memory to perform each process preventing complicated management of data for different processes and/or interference from other processes using the memory at the same time.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to partition the memory and provide the signal to a recorder in the device of Sakamoto et al.

Regarding claims 22 and 26, as discussed in previous rejections, a memory means with a first area and a second area for character generation (art rejection of claim 7); and a high efficiency coding means (art rejection of claim 21). Please refer to the art rejection of claims 7 and 21. If high efficiency coding is performed, then high efficiency decoding must be performed when the data is reproduced. Making it obvious to have a high efficiency decoding means using a first area for expanding the video signal.

It would have been highly desirable to have a high efficiency coding/decoding means so that the device would require less recording capacity to record data; and so that the compressed data could also be reproduced.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention of have a high efficiency coding/decoding means in the device of Sakamoto et al.

Regarding claims 23-24 and 27-28, Sakamoto et al does not disclose error correction encoding (ECC) the encoded video signal.

Jeong teaches error correction decoding data (fig. 3). Error correction is a well known process applied to digital data such as MPEG to reduce errors during recording and/or reproduction. The first and third areas were discussed in the art rejection of claims 7 and 17 (please refer to the art rejection of claims 7 and 17). Jeong teaches a second area to be accessed by the error correction decoding means, suggesting the data was previously error correction encoded. It would have been obvious to have an error correction encoder/decoder using a second area of the memory means to error correct the video signal.

It would have been highly desirable to have an error correction encoding/decoding means using a second area so that the video signal is error corrected to remove errors, which create noise in the video signal.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to have an error correction encoder/decoder using a second area in the device of Sakamoto et al.

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7. Claims 9-10 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al in view of Takemoto et al, Jeong, and Honda (6,181,878).

Regarding claims 9 and 18, Sakamoto et al does not disclose a first and second area in the memory.

As discussed in the art rejection of claim 7, Jeong's teachings make a first area to be accessed by the compression or expanding means and a second area (discloses as the third area in claim 7) in which a character signal is stored obvious. Clearly the character signal must also store information on where the character data will be placed in the image plane; therefore, it is inherent that the second area corresponds to an image plane represented by the video signal. Further Sakamoto et al teaches generating character data (fig. 4), which must represent a value of pixel data, and storing it into a second area (discussed above). Sakamoto et al does not disclose a table for outputting pixel data corresponding to the codes read out from the second area.

Honda teaches a table (17, fig. 1) outputting pixel data in figure 3 corresponding to codes. For example, if the code "10" is input from table B then the text "CALIFORNIA" is generated.

It would have been highly desirable to have a second area in which pixel data is written so that text can be overlaid on an image. In addition, a table would be desirable so that a table of pre-stored text could be used to easily generate commonly used text.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention have a second area and a table in Sakamoto et al.

Regarding claims 10 and 19, Sakamoto et al discloses combining means for combining the character signal generated by the generating means with the video signal (25), the codes representing control data for controlling a combining operation of the combining means, the combining means performing the combining operation in accordance with the codes (Honda, fig. 3). The table with the codes is stored in a ROM (17, fig. 1), and one of ordinary skill in the art recognizes that the codes can be considered to be control data for controlling the combining operation. Since the code is stored and the actual text data is not, the codes must be used to look up the text data in the table to combine the character data with the video data.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harper et al, Lemelson, and Tadokoro et al disclose character generators using buffer memories.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Polin Chieu whose telephone number is (703) 308-6070. The examiner can normally be reached on M-Th 8:00 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B. Christensen can be reached on (703) 308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any response to this action should be mailed to:

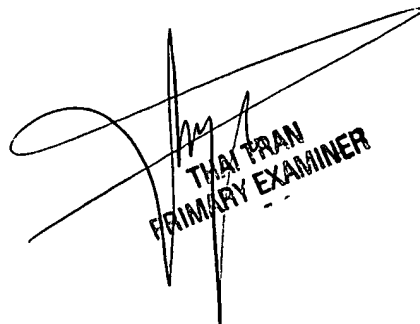
Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

PC
May 28, 2003



THAI TRAN
PRIMARY EXAMINER